

Louisville Metro Air Pollution Control District
850 Barret Ave., Louisville, Kentucky 40204
20 March 2012

Title V Statement of Basis

Company: LFFlex, LLC, Louisville Laminating Plant

Plant Location: 1225 W. Burnett Ave, Louisville, KY 40210

Date Application Received: 14 February 2012

Date Admin Complete: 14 February 2012

Date of Draft Permit: 18 February 2012

Date of Proposed Permit: N/A

District Engineer: Chris Gerstle

Permit No: 148-97-TV (R3)

Plant ID: 0015

SIC Code: 3497

NAICS: 332999

AFS: 00015

Introduction:

This permit will be issued pursuant to: (1) Regulation 2.16, (2) Title 40 of the Code of Federal Regulations Part 70, and (3) Title V of the Clean Air Act Amendments of 1990. Its purpose is to identify and consolidate existing District and Federal air requirements and to provide methods of determining continued compliance with these requirements.

Jefferson County is classified as an attainment area for lead (Pb), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), carbon monoxide (CO), 1 hr and 8 hr ozone (O₃), and particulate matter less than 10 microns (PM₁₀); and is a non-attainment area for particulate matter less than 2.5 microns (PM_{2.5}).

Application Type/Permit Activity:

☐ Initial Issuance

☒ Permit Revision

☒ Administrative

☐ Minor

☐ Significant

☐ Permit Renewal

Compliance Summary:

☒ Compliance certification signed

☐ Compliance schedule included

☐ Source is out of compliance

☒ Source is operating in compliance

I. Source Information

1. **Product Description:** Laminated and/or coated/printed aluminum foil.
2. **Process Description:** Reynolds Packaging laminates paper, board and other substrates to aluminum foil using adhesives or heat seal. Rotogravure printing stations are used to apply water-based and solvent-based coatings and inks to the aluminum foil, paper and board. The company has eight machines which do a combination of laminating and printing/coating. Each machine is equipped with a drying oven. The coater heat seals materials together.
3. **Site Determination:** There are no other facilities that are contiguous or adjacent and under common control.
4. **Emission Unit Summary:**

| Emission Unit | Equipment Description |
|---------------|---|
| U1 | Laminator #12 and Thermal Oxidizer; Lacquer mixing room |
| U2 | Laminators #6, #7, #8, #9, #10, #11, & #14, Coater #15 |
| U3 | Storage Tanks |
| U4 | Boilers |

5. **Permit Revisions:**

| Revision No. | Issue Date | Public Notice Date | Type | Page No. | Description |
|--------------|------------|--------------------|---------|---------------|---|
| N/A | 06/13/2001 | 12/10/2000 | Initial | Entire Permit | Initial Permit Issuance |
| R1 | 11/11/2002 | NA | Admin | Page 35 | Typo correction |
| R2 | 12/15/2011 | 10/29/2011 | Renewal | Entire Permit | Significant Changes; Name and Responsible Official Change; Correct the applicable boiler regulation from 6.07 to 7.06; Incorporate CAM Plan |
| R3 | 03/20/2012 | 02/17/2012 | Admin | Cover Page | Ownership/Name Change, See Administrative Change Document for list of corrections |

6. **Fugitive Sources:** There are fugitive VOC emissions from the Laminators, the Lacquer Mixing Room, and the Lacquer Storage Room.

7. Emission Summary:

| Pollutant | Actual Emissions (tpy) 2010 Data | Major Source Status (based on PTE) |
|------------------|-------------------------------------|---------------------------------------|
| CO | 3.58 | No |
| NO _x | 4.27 | No |
| SO ₂ | 0.04 | No |
| PM ₁₀ | 0.33 | No |
| VOC | 68.48 | Yes* |
| Single HAP>1 tpy | NA | Yes* |
| Total HAPs | 0.08 | Yes* |

8. Applicable Requirements:

☐ PSD ☐ 40 CFR 60 ☒ 40 CFR 63 ☒ SIP
☒ NSR ☐ 40 CFR 61 ☒ District-Origin ☐ Other

9. Future MACT Requirements:

40 CFR 63 Subpart DDDDD

National Emission Standards for Industrial, Commercial, and Institutional Boilers and Process Heaters (Final rule published March 21, 2011, stayed May 18, 2011). The company has submitted the Part 1 and 2 112j permit application for the stayed boiler MACT (40 CFR 63 Subpart DDDDD), which was received March 6, 2009 and May 6, 2009 respectively. The District is evaluating how to implement this requirement.

10. Referenced Federal Regulations in Permit:

40 CFR 60 Subpart A

General Provisions

40 CFR 63 Subpart KK

National Emission Standards for the Printing and Publishing Industry

40 CFR Part 64

Compliance Assurance Monitoring for Major Stationary Sources

II. Regulatory Analysis

1. Acid Rain Requirements: The source is not subject to the Acid Rain Program.

2. Stratospheric Ozone Protection Requirements: Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any facility that manufactures, sells, distributes, or otherwise uses any of the listed chemicals. This source does not manufacture, sell, or distribute any of the listed chemicals. The source's use of listed chemicals is that in fire extinguishers, chillers, air conditioners and other HVAC equipment.

3. **Prevention of Accidental Releases 112(r):** The source does not manufacture, process, use, store, or otherwise handle one or more of the regulated substances listed in 40 CFR Part 68, Subpart F, and District Regulation 5.15, *Chemical Accident Prevention Provisions*, in a quantity in excess of the corresponding specified threshold amount.
4. **40 CFR Part 64 Applicability Determination:** The source is subject to 40 CFR Part 64 - *Compliance Assurance Monitoring for Major Stationary Sources* since the source is major for VOC and needs to apply control devices to ensure the compliance with the VOC emission standards specified in the Title V permit.
5. **Basis of Regulation Applicability**

- a. **Plant-wide**

Reynolds Laminating is a major source for VOC and HAP. Regulation 2.16 - *Title V Operating Permits* establishes requirements for major sources.

Regulations 5.01, 5.21, and 5.23 (STAR Program) establish requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards. Reynolds Laminating submitted their Category 1 and Category 2 TAC Environmental Acceptability Demonstration to the District on April 12, 2007 and May 24, 2007. The report stated that all emissions of Category 1 TACs and Category 2 TACs are de minimis by MSDS, Trivial and Insignificant Activities and natural gas combustion. LMAPCD approved the STAR EA Compliance Demonstration for Category 1 and 2 TACs on October 6, 2008.

The TAC emissions from the combustion of natural gas are considered to be “de minimis emissions” by the District. This includes all of the emissions from a process or process equipment for which the only emissions are the products of combustion of natural gas, such as from a natural gas-fired boiler or turbine, but does not include the other emissions from a process or process equipment that are not the products of the combustion of natural gas.

- b. **Applicable Regulations:**

| Regulation | Title | Type |
|------------|--|-------|
| 1.05 | Compliance with Emission Standards and Maintenance Requirements | SIP |
| 2.04 | Construction or Modification of Major Sources in or Impacting upon Non-Attainment Areas (Emission Offset Requirements) | SIP |
| 2.16 | Title V Operating Permits | SIP |
| 5.02 | Adoption and Incorporation by Reference of National Emissions Standards for Hazardous Air Pollutants | Local |
| 5.21 | Environmental Acceptability for Toxic Air Contaminants | Local |
| 6.18 | Solvent Metal Cleaning Equipment | SIP |
| 6.29 | Graphic Arts Facilities Using Rotogravure or Flexographic Printing | SIP |

| Regulation | Title | Type |
|----------------------|---|---------|
| 6.42 | Reasonably Available Control Technology Requirements for Major Volatile Organic Compound- and Nitrogen Oxides-Emitting Facilities | SIP |
| 7.06 | Standards of Performance for New Indirect Heat Exchangers | SIP |
| 7.12 | Standard of Performance for New Storage Vessels for Volatile Organic Compounds | SIP |
| 40 CFR 63 Subpart A | General Provisions | Federal |
| 40 CFR 63 Subpart KK | National Emission Standards for the Printing and Publishing Industry | Federal |
| 40 CFR 64 | Compliance Assurance Monitoring for Major Stationary Sources | Federal |

c. **Basis for Applicability**

| Regulation | Basis for Applicability |
|----------------------|--|
| 1.05 | All sources emitting VOCs in quantities equal to or greater than 100 tons per year and all Control Technique Guidance (CTG) sources emitting VOCs in quantities of 25 tons or more per year or some lesser applicability amount as defined in the specific CTG regulation shall maintain daily records and calculations that demonstrate daily compliance with the VOC emission standards defined in the applicable portions of Regulation 6 or 7. |
| 2.04 | Jefferson County was non-attainment for VOC. |
| 6.29 | Applies to each printing line for packaging rotogravure, publication rotogravure, specialty rotogravure, or flexographic printing. |
| 6.42 | Applies to the VOC and NO _x emissions from all VOC and NO _x -emitting facilities located at all major VOC and NO _x -emitting stationary sources |
| 7.02 | Adoption of Federal New Source Performance Standards |
| 7.06 | Establishes emission standards for indirect heat exchangers constructed after April 9, 1972 with a heat input capacity of less than 250 MMBtu/hr. |
| 7.12 | Establishes emission standards for each storage vessel for volatile organic compounds that commences construction or modification on or after April 19, 1972, and has a storage capacity greater than 250 gallons. |
| 40 CFR 63 Subpart A | These standards regulate specific categories of stationary sources that emit (or have the potential to emit) one or more hazardous air pollutants |
| 40 CFR 63 Subpart KK | Applies to each new and existing facility that is a major source of hazardous air pollutants (HAP), as defined in 40 CFR 63.2, at which publication rotogravure, product and packaging rotogravure, or wide-web flexographic printing presses are operated |
| 40 CFR 64 | Applies to each pollutant specific emission unit that is subject to an emission limitation or standard; uses a control device to achieve compliance; and has pre-control emissions that exceed or are equivalent to the major source threshold. |

d. **Emission Unit U1 – Laminator #12**i. **Equipment:**

| Emission Point | P/PE (ID) | Capacity | Installation Date | Applicable Regulation |
|-----------------------|---|-----------------|--------------------------|---|
| E-1/1a | Laminator/Oven #12 controlled by a thermal oxidizer (C-1) | 1,500 fpm | 1970 | 1.05 6.29 40 CFR 63 Subpart KK 40 CFR 64 |

The following equipment is covered in Regulation 6.29, section 1.8.1: Lacquer mixing room containing three submerged-fill arms for fillings drums with solvent, one mixer, and one soak tank. This equipment is utilized in the operation of Emission Units U1 and U2.

ii. **Standards/Operating Limits**1) **VOC**

- (a) Regulation 6.29 establishes VOC content limits for various inks and solvents (<25% VOC, >60% non VOC, or <0.5 lb VOC/lb solid). This laminator may use inks and solvents which exceed the VOC requirements. Therefore, a percent reduction limit is established.
- (b) When using the thermal oxidizer to comply with the percent reduction standard (65%), a minimum temperature (1400 °F, or the combustion chamber temperature established during the most recent performance test that demonstrated compliance with >65% destruction efficiency) must be maintained over a three hour averaging period. The oxidizer combustion chamber temperature is monitored with an electronic thermocouple and the emission control system has an interlock system incorporated into the oxidizer control that shuts down the laminator if the average oxidizer temperature falls below 1375 °F for one hour. The functionality of the interlock / automatic shut down system is tested annually.
- (c) Reynolds Packaging is a CTG source and must show compliance on a daily basis per Regulation 1.05, section 4.1.

2) **HAP**

40 CFR 63 Subpart KK establishes HAP emission limits or content limits for various ink and solvents. Reynolds Packaging has opted to show compliance with the content limit standard (<4% HAP).

3) **TAC**

Regulation 5.21, section 2.2 establishes Environmental Acceptability Goals for TACs and Regulation 5.20 provides methodology for determining benchmark ambient concentration of TAC. In accordance with Regulation 5.20 and 5.21, the source shall not allow any TAC emissions to exceed environmentally acceptable levels.

iii. **Monitoring/Record Keeping**1) **VOC**

- (a) Regulation 6.29 has specific record keeping requirements.
- (b) When using solvent based inks and coatings Reynolds Packaging is required to use the thermal oxidizer to meet the VOC emission standards, therefore a CAM plan is necessary.
- (c) Reynolds Packaging is a CTG source and must maintain daily records and calculations that demonstrate daily compliance with the VOC emission standards per Regulation 1.05, section 4.1.

2) **HAP**

40 CFR 63 Subpart KK allows many methods to show compliance with the standard. Reynolds Packaging has opted to use Equation 6 from the Federal Regulation.

3) **TAC**

Regulation 2.16, sections 4.1.9.1 and 4.1.9.2 establish monitoring and record keeping requirements to assure ongoing compliance with the terms and conditions of the permit.

iv. **Reporting**1) **VOC/TAC**

Regulations 6.24 and 5.01 do not require any specific reporting requirements for VOC and TAC, however, Regulation 2.16, section 4.1.9.3 requires sufficient reporting requirements to assure compliance with the terms and conditions of the permit.

2) **HAP**

40 CFR 63 Subpart KK requires semi-annual reports including any exceedances of the standard, if applicable.

v. **Testing**1) **VOC**

Regulation 6.29 requires a minimum level of control of VOC emissions. The stack test will verify that level of control is achieved.

e. **Emission Unit U2 – Seven Laminators & One Coater**i. **Equipment:**

| Emission Point | P/PE | Capacity | Installation Date | Applicable Regulation |
|----------------|--------------------|-----------|-------------------|---|
| E-2/2a | Laminator/Oven #6 | 1,500 fpm | 1956 | 1.05, 2.04 6.29 40 CFR 63 Subpart KK |
| E-3/3a | Laminator/Oven #7 | 1,500 fpm | 1956 | 1.05, 6.29 40 CFR 63 Subpart KK |
| E-4/4a | Laminator/Oven #8 | 1,500 fpm | 1961 | |
| E-5/5a | Laminator/Oven #9 | 1,500 fpm | 1961 | |
| E-6/6a | Laminator/Oven #10 | 1,500 fpm | 1971 | |
| E-7/7a | Laminator/Oven #11 | 1,500 fpm | 1967 | |
| E-8/8a | Laminator/Oven #14 | 1,500 fpm | 1971 | |
| E-9/9a | Coater/Oven #15* | NA | 1963 | |

* Coater #15 thermally laminates film to an aluminum or steel sheet to produce coated cable wrap for the telecommunications industry. The metal sheet is first heated by electric induction rolls and then nipped with the film on one or both sides. The laminated substrate is then sent through a gas oven.

ii. **Standards/Operating Limits**1) **VOC**

- (a) Through Regulation 2.04, the 40.689 tons per year VOC limit was established to avoid PSD/NSR because in 1993 a physical change was made to Laminator #6 increasing the machine speed. The 1991/1992 average emission rate was 0.69 tons per year. $[(40.689 - 0.69) = 39.999]$
This is less than the significant level of 40 tons specified in District Regulation 2.04, Appendix A.
- (b) This emission unit was previously covered by a source-specific State Implementation Plan Revision. The printing/coating machines were treated as one affected facility with a pound per day and ton per year VOC emission limit. The source can now comply with District Regulation 6.29, section 3 material composition limits.
- (c) Regulation 6.29 establishes VOC content limits for various inks and solvents. (<25% VOC, >60% non VOC, or <0.5 lb VOC/lb solid). These laminators

use inks and solvents which do not exceed the VOC requirements.

- (d) Reynolds Packaging is a CTG source and must show compliance on a daily basis per Regulation 1.05, section 4.1.

2) **HAP**

40 CFR 63 Subpart KK establishes HAP emission limits or content limits for various ink and solvents. Reynolds Packaging has opted to show compliance with the content limit standard.

3) **TAC**

Regulation 5.21, section 2.2 establishes Environmental Acceptability Goals for TACs and Regulation 5.20 provides methodology for determining benchmark ambient concentration of TAC. In accordance with Regulation 5.20 and 5.21, the source shall not allow any TAC emissions to exceed environmentally acceptable levels.

iii. **Monitoring/Record Keeping**

1) **VOC**

- (a) Monthly records of VOC emissions are required to show compliance with the ton per year limit.
- (b) Regulation 6.29 has specific record keeping requirements.
- (c) Reynolds Packaging is a CTG source and must maintain daily records and calculations that demonstrate daily compliance with the VOC emission standards per Regulation 1.05, section 4.1.

2) **HAP**

40 CFR 63 Subpart KK allows many methods to show compliance with the standard. Reynolds Packaging has opted to use Equation 6 from the Regulation.

3) **TAC**

Regulation 2.16, sections 4.1.9.1 and 4.1.9.2 establish monitoring and record keeping requirements to assure ongoing compliance with the terms and conditions of the permit.

iv. **Reporting**

1) **VOC/TAC**

Regulations 6.24 and 5.01 do not require any specific reporting requirements for VOC and TAC, however, Regulation 2.16, section 4.1.9.3 requires sufficient reporting

requirements to assure compliance with the terms and conditions of the permit.

2) **HAP**

40 CFR 63 Subpart KK requires semi-annual reports including any exceedances of the standard, if applicable.

f. **Emission Unit U3 – Storage Tanks**

i. **Equipment:**

| Emission Point | P/PE | Capacity | Installation Date | Applicable Regulation |
|----------------|--|--------------------------------|-------------------|-----------------------|
| E-11 | Tank #3, One printing solvents tank [T47 solvent (50% toluene and 50% MEK)] | 1,000 gallon | 1988 | 1.05 7.12 |
| E-12 | Tank #2, One printing solvents tank [T151 solvent (mixture of ethyl acetate and isopropyl acetate)] | 2,000 gallon | 1988 | |
| E-13 | Tank #1, One printing solvents tank [isopropyl alcohol] | 1,000 gallon | 1988 | |
| E-13A | Tank #4, One water-based coatings tank [Bendel, for storing polyester coatings. Equipped with a four inch conservation vent, but does not have a submerged fill pipe]* | 10,000 gallon | 1998 | |
| E-13B | Portable Tote Tanks, for raw material shipment of solvent-based coatings + | each approximately 350 gallons | NA | |

* The Federal Regulation, 40 CFR 60 Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984, was amended by EPA on October 15, 2003. The amendment excluded storage vessels that contain a liquid with a maximum true vapor pressure below 3.5 kilopascals (26.2 mm Hg). Due to the tank sizes, they are not subject to 40 CFR 60 Subpart Kb.

+ Portable tote tanks (~350 gallons) are for raw material shipment of solvent-based coatings. They are not filled on-site, rather are shipped off when empty.

ii. **Standards/Operating Limits**

1) **VOC**

- (a) Tanks #1, #2, and #3 have a storage capacity greater than 250 gallons, but less than 40,000 gallons and have contents with a true vapor pressure greater than 1.5 psia. They are required to be equipped with a permanent submerged fill pipe per Regulation 7.12.

- (b) Tank #4 has a storage capacity greater than 250 gallons, but less than 40,000 gallons. It is not equipped with a permanent submerged pipe; therefore the vapor pressure of the contents must be less than 1.5 psia per Regulation 7.12.
- (c) The portable tote tanks have a storage capacity greater than 250 gallons, but less than 40,000 gallons. The contents have a vapor pressure greater than 1.5 psia, but the totes are never filled, they are emptied and then shipped offsite.

2) **TAC**

Regulation 5.21, section 2.2 establishes Environmental Acceptability Goals for TACs and Regulation 5.20 provides methodology for determining benchmark ambient concentration of TAC. In accordance with Regulation 5.20 and 5.21, the source shall not allow any TAC emissions to exceed environmentally acceptable levels. A one-time compliance demonstration was performed for TACs on July 14, 2009 and the de minimis levels cannot be exceeded uncontrolled.

iii. **Monitoring/ Record Keeping**

1) **VOC**

The source is required to monitor and maintain records of the material stored in Tank #4. If the contents of the storage vessel are changed, a record shall be made of the new contents, the new vapor pressure, and the date of the change in service per Regulation 2.16, sections 4.1.9.1 and 4.1.9.2.

2) **TAC**

Regulation 2.16, sections 4.1.9.1 and 4.1.9.2 establish monitoring and record keeping requirements to assure ongoing compliance with the terms and conditions of the permit.

iv. **Reporting**

1) **VOC/TAC**

Regulations 6.24 and 5.01 do not require any specific reporting requirements for VOC and TAC, however, Regulation 2.16, section 4.1.9.3 requires sufficient reporting requirements to assure compliance with the terms and conditions of the permit.

g. **Emission Unit U4 – Heating Boilers**i. **Equipment:**

| Emission Point | P/PE | Capacity | Installation Date | Applicable Regulation |
|----------------|--|-----------------|-------------------|-----------------------|
| E-14 | One natural gas boiler, Whirlpower (West), installed in 1974 | 16.737 MMBtu/hr | 1974 | 7.06 |
| E-15 | One natural gas boiler, Whirlpower (East), installed in 1974 | 16.737 MMBtu/hr | 1974 | |

These boilers were previously permitted incorrectly under Regulation 6.07.

ii. **Standards/Operating Limits**1) **PM**

The two Whirlpower boilers, rated at 16.737 MMBtu/hr each, installed in 1974 are subject to Regulation 7.06. The emission standard for PM is determined in accordance with Regulation 7.06, section 4.1.4 as follows:

$$\begin{aligned}\text{Total Heat Input Capacity} &= 33.474 \text{ MMBtu/hr} \\ \text{PM limit} &= 0.9634 * (15)^{-0.2356} = 0.51 \text{ lb/MMBtu}\end{aligned}$$

2) **SO₂**

The two Whirlpower boilers, rated at 16.737 MMBtu/hr each, installed in 1974 are subject to Regulation 7.06. The emission standard for SO₂ is determined in accordance with Regulation 7.06, section 5.1.1. For natural gas combustion and a heat input capacity less than 145 MMBtu/hr, the standard is 1 lb/MMBtu.

3) **Opacity**

The boilers are subject to the opacity standards in accordance with Regulation 7.06, section 4.2.

iii. **Monitoring and Record Keeping****SO₂/PM/Opacity**

- 1) Regulation 7.06 does not require any specific monitoring requirements for SO₂, PM, and Opacity, however, Regulation 2.16, sections 4.1.9.1 and 4.1.9.2 establishes monitoring requirements to assure ongoing compliance with the terms and conditions of the permit.
- 2) A one-time PM and SO₂ compliance demonstration has been performed for the boilers, using AP-42 emission factors and combusting natural gas, and the emission standards cannot be exceeded. Therefore, there are no monitoring, record keeping, and reporting requirements for these boilers with respect to PM and SO₂ emission limits.
- 3) The District has determined that using a natural gas fired

boiler will inherently meet the 20% opacity standard. Therefore, the company is not required to perform periodic monitoring to demonstrate compliance with the opacity standard.

iv. **Reporting**

SO₂/PM/Opacity

Regulation 6.07 and 7.06 does not require any specific reporting requirements for SO₂, PM, and Opacity, however, Regulation 2.16, section 4.1.9.3 requires sufficient reporting to assure ongoing compliance with the terms and conditions of the permit.

III. Other Requirements

1. **Temporary Sources:** The source did not request to operate any temporary facilities.
2. **Short Term Activities:** The source did not report any short term activities.
3. **Emissions Trading:** N/A
4. **Alternative Operating Scenarios:** The source requested an alternative operating scenario in its Title V permit application that would allow Laminator #12 to operate without the thermal oxidizer when water based inks and coatings are being used.
5. **Compliance History:**

| Incident Date(s) | Regulation Violated | Result |
|------------------|---------------------|---------|
| 9/7/1999 | 2.03 | Settled |
| 6/20/2000 | 2.03 | Settled |
| 9/19/2000 | 7.18 | Settled |

Reynolds Packaging LLC, Louisville Laminating Plant is required to submit their annual Compliance Certification to the District on or before April 15th of each calendar year. As of the draft date of Permit 148-97-TV (R2), there are no compliance schedules in effect or progress reports required.

6. **Calculation Methodology or Other Approved Method:**

Emission Unit U1 & U2

- a. Uncontrolled VOC emissions from the laminators may be calculated according to the following methodology:

$$\text{VOC (lb)} = \text{Coating used (gal)} \times \text{Density (lb/gal)} \times \text{VOC content (\%)} \times$$

or

$$\text{VOC (lb)} = \text{Coating used (gal)} \times \text{VOC content (lb/gal)}$$

Controlled VOC emissions from Laminator #12 may be calculated according to the following methodology:

$$\text{VOC (lb)} = \text{Coating used (gal)} \times \text{Density (lb/gal)} \times \text{VOC content (\%)} \times [100 - \text{Capture Efficiency (\%)} \times \text{Destruction Efficiency (\%)}]$$

or

$$\text{VOC (lb)} = \text{Coating used (gal)} \times \text{VOC content (lb/gal)} \times [100 - \text{Capture Efficiency (\%)} \times \text{Destruction Efficiency (\%)}]$$

An example of a methodology to determine compliance is as follows:

$$\frac{\text{Total Solvent Based Controlled VOC Emissions}}{\text{Total Solvent Based Uncontrolled VOC Emissions}} \times 100\% < 35\%$$

- b. In a letter dated January 9, 2001, Reynolds submitted their Notification of Compliance Status to the District and proposed to follow the compliance option §63.825(b)(4). To demonstrate compliance with §63.825(b)(4), the following equation is used:

$$H_L = \frac{\sum_{i=1}^p M_i C_{hi} + \sum_{j=1}^q M_j C_{hj}}{\sum_{i=1}^p M_i + \sum_{j=1}^q M_j}$$

C_{hi} = the organic HAP content of ink or other solids-containing material, i, expressed as a weight-fraction, kg/kg.

C_{hj} = the organic HAP content of solvent j, expressed as a weight-fraction, kg/kg.

H_L = the monthly average, as-applied, organic HAP content of all solids-containing materials applied at less than 0.04 kg organic HAP per kg of material applied, kg/kg.

M_i = the mass of ink or other material, i, applied in a month, kg.

M_j = the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, applied in a month, kg.

p = the number of different inks, coatings, varnishes, adhesives, primers, and other materials applied in a month.

q = the number of different solvents, thinners, reducers, diluents, or other non-solids-containing materials applied in a month.

7. Significant Activities

| Equipment | Quantity | PTE (tpy) | Basis for Exemption |
|---|----------------------|----------------------|--|
| Internal Combustion Engines (Forklifts) | 4 | 0.14 NO _x | Regulation 2.02, 2.2 |
| Brazing, Soldering or Welding Equipment | 1 fixed / 1 portable | 0.02 PM | Regulation 2.02, 2.3.4 |
| Woodworking, Not Including Conveying, Hogging or Burning of Sawdust | 1 | 0.03 PM | Regulation 2.02, 2.3.5 |
| Emergency Relief Vents and Ventilating Systems (Not Otherwise Regulated) | Various | 0 | Regulation 2.02, 2.3.10 |
| Laboratory Ventilating | 1 | 0.03 VOC | Regulation 2.02, 2.3.11 |
| Dust or Particulate Collectors that are Located In-Doors, Vent Directly Indoors Into the Work Space | Various | 0.03 PM | Regulation 2.02, 2.3.21 |
| Cold solvent parts cleaners equipped with a functional secondary reservoir | 1 | 0.01 VOC | Regulation 2.02, 2.3.22 See Note 6) |
| Cooling Towers | 2 | 0.01 PM | Regulation 2.16, 1.22 |
| Process Scrap conveying systems | 2 | 4.15 PM | See Note 7) |
| Shot blast cabinet | 1 | 4.68 PM | See Note 7) |

- 1) Insignificant activities identified in District Regulation 2.02 section 2 may be subject to size or production rate disclosure requirements pursuant to Regulation 2.16 section 3.5.4.1.4.
- 2) Insignificant activities identified in District Regulation 2.02 section 2 shall comply with generally applicable requirements as required by Regulation 2.16 section 4.1.9.4.
- 3) The District has determined pursuant to Regulation 2.16 section 4.1.9.4 that no monitoring, record keeping, or reporting requirements apply to the insignificant activities listed.
- 4) The Insignificant Activities Table is correct as of the date the permit was proposed for review by U.S. EPA, Region 4.
- 5) The owner or operator shall submit an updated list of insignificant activities that occurred during the preceding year pursuant to Regulation 2.16 section 4.3.5.3.6.
- 6) This equipment has an applicable regulation, but meets the definition of an insignificant activity in Regulation 2.16, section 1.23.1.2. Regulation 6.18 applies, with standards in sections 4.1.1 through 4.1.4, 4.1.6, 4.1.8; 4.2.1 through 4.2.7 and 4.3.2. Record keeping requirements are in sections 4.4.2 and 4.4.3.
- 7) This cabinet has an applicable regulation, but meets the definition of insignificant activity in Regulation 2.16, section 1.23.1.2. Regulation 7.08 applies, with a standard of 2.34 lb/hr, but the equipment cannot exceed the standard uncontrolled so there are no monitoring or record keeping requirements. The emissions shall be reported on the annual emission inventory.